#### Message

From: Strynar, Mark [/O=EXCHANGELABS/OU=EXCHANGE ADMINISTRATIVE GROUP

(FYDIBOHF23SPDLT)/CN=RECIPIENTS/CN=5A9910D5B38E471497BD875FD329A20A-STRYNAR, MARK]

**Sent**: 11/2/2017 4:57:47 PM

To: Ryan, Jeff [Ryan.Jeff@epa.gov]
CC: Krebs, Ken [krebs.ken@epa.gov]

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Attachments: DEQ Emissions Information Emerging Contaminants (revision).pdf

Sorry here it is.

Mark

From: Ryan, Jeff

Sent: Thursday, November 02, 2017 11:03 AM
To: Strynar, Mark <Strynar.Mark@epa.gov>

Cc: Krebs, Ken <krebs.ken@epa.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

I was referring to that list/table of PFAS with discharge rates you showed us yesterday. Maybe that was NH.

From: Strynar, Mark

Sent: Thursday, November 02, 2017 10:48 AM

To: Ryan, Jeff < Ryan.Jeff@epa.gov>
Cc: Krebs, Ken < krebs.ken@epa.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Here is what they have on site under the TSCA listing.

Mark

From: Ryan, Jeff

**Sent:** Thursday, November 02, 2017 8:58 AM **To:** Strynar, Mark < Strynar. Mark@epa.gov> **Cc:** Krebs, Ken < krebs.ken@epa.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Mark – did you say you could get us a copy of the Chemours PFAS list?

I'd like to determine if there are any standards out there and how mature. Ideally, I'd like to find some labelled homologues that could be spiked and used as part of the sampling and analysis. If you know of any, even better.

From: Strynar, Mark

**Sent:** Thursday, November 02, 2017 8:02 AM **To:** Oneal, Gregg <gregg.oneal@ncdenr.gov>

Cc: Ryan, Jeff < Ryan\_Jeff@epa.gov >; Lindstrom, Andrew < Lindstrom\_Andrew@epa.gov >; Offenberg, John

<Offenberg.John@epa.gov>; Krebs, Ken <krebs.ken@epa.gov>; Riedel, Theran <Riedel.Theran@epa.gov>; Vandervaart,

Donald <donald.vandervaart@ncdenr.gov>; Gary Saunders <gary.saunders@ncdenr.gov>; Vogel, Shannon

<shannon.vogel@ncdenr.gov>; Hall, Brent W <brent.hall@ncdenr.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

### Gregg,

I gave it a read. Concerning the sampling protocol I am not the one who can comment. I hope others can on that. My main concern would be the measurement only for the HFPO-DA in the samples. Per the emissions data I saw earlier in the week HFPO-DA is one player in the emissions estimates and NOT one of the major players based on what I can tell. I see many more potential contaminants that have much higher mass outputs:

CAS 16090-14-5 (Nafion Monomer) 10493-49-3 (the C4 vinyl ether compound) 1187-93-5 (the C3 vinyl ether compound) 1623-05-08 (the C5 vinyl ether compound) 3330-14-1 (a C8 perfluoro polyether) 428-59-1 (HFPO)

Just to name a few. These all have way more mass output and are significant contributors.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]
Sent: Wednesday, November 01, 2017 5:02 PM

To: Strynar, Mark < <a href="mailto:Strynar\_Mark@epa.gov">Strynar\_Mark@epa.gov</a>>

Cc: Ryan, Jeff <Ryan.Jeff@epa.gov>; Lindstrom, Andrew <Lindstrom.Andrew@epa.gov>; Offenberg, John <Offenberg.John@epa.gov>; Krebs, Ken <krebs.ken@epa.gov>; Riedel, Theran <Riedel.Theran@epa.gov>; Vandervaart, Donald <donald.vandervaart@ncdenr.gov>; Gary Saunders <gary.saunders@ncdenr.gov>; Vogel, Shannon <a href="mailto:shannon.vogel@ncdenr.gov">shannon.vogel@ncdenr.gov>; Hall, Brent W <br/>
Srent.hall@ncdenr.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

#### Mark,

Yes we would like to talk again. Also we received a test proposal for testing at Chemours late yesterday. We would appreciate your comments if you are available to do so.

Brent Hall would like to discuss the emissions but will be out of the office the next two days in training.

Thanks,

Gregg

# Thomas Gregg O'Neal, III, P.E.

Engineer
Division of Air Quality, Technical Services Section
North Carolina Department of Environmental Quality

919 707-8415 office gregg.oneal@ncdenr.gov

217 West Jones Street 1601 Mail Service Center Raleigh, NC 27699



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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]
Sent: Wednesday, November 01, 2017 4:02 PM
To: Oneal, Gregg <gregg.oneal@ncdenr.gov>

Cc: Ryan, Jeff < Ryan.Jeff@epa.gov>; Lindstrom, Andrew < Lindstrom.Andrew@epa.gov>; Offenberg, John < Offenberg, John@epa.gov>; Krebs, Ken < krebs.ken@epa.gov>; Riedel, Theran < Riedel.Theran@epa.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

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### Gregg,

We just had a meeting with Jeff Ryan here at EPA. He says he knows Brent. I don't have Brent's contact info. He would like to have a chat about the PFAS emissions at the Fayetteville Chemours plant if you guys have a chance.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]

**Sent:** Monday, October 30, 2017 2:55 PM **To:** Strynar, Mark < Strynar. Mark@epa.gov>

Subject: RE: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Mark,

We would like to visit with you and the lab form 10 to 11 am tomorrow. I feel an hour should be sufficient time unless you think otherwise. Should we just plan to meet you at the front desk? Thanks,

Gregg

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**Sent:** Monday, October 30, 2017 2:02 PM **To:** Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: [External] RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

**CAUTION:** External email. Do not click links or open attachments unless verified. Send all suspicious email as an attachment to report.spam@nc.gov.

Tomorrow works fine from me between 7-11 AM. After that I am full. Wednesday is terrible for me. I am pretty much in meetings all day 9:30 am to 4:30 PM.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]

**Sent:** Monday, October 30, 2017 1:46 PM **To:** Strynar, Mark < Strynar.Mark@epa.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Mark,

I would like arrange a visit for some of the NC DAQ Tech Services staff to meet and see your lab sometime this week if possible. Tomorrow would be optimum or early Wednesday.

Thanks, Gregg

# Thomas Gregg O'Neal, III, P.E.

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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]

**Sent:** Thursday, September 28, 2017 7:29 AM **To:** Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Ok Gregg. FYI I do not run Method 537. That method is an EPA standard method. We run our own internal developed methods for PFAS.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]
Sent: Wednesday, September 27, 2017 3:11 PM
To: Strynar, Mark < Strynar, Mark@epa.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

#### Mark,

I think at this time with other issues taking priority over here at DAQ we will have to try to work out another date and time. I will try to get back with you sometime in the coming weeks to arrange this. I still very much want to see the M537 equipment.

Thanks Gregg

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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]
Sent: Wednesday, September 27, 2017 8:12 AM
To: Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Gregg,

Thursday from 3-4 PM is booked. I have to leave at 4 PM **Ex. 6 Personal Privacy (PP)** otherwise I am usually here to 4:30.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]

**Sent:** Tuesday, September 26, 2017 3:45 PM **To:** Strynar, Mark < <u>Strynar.Mark@epa.gov</u>>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Mark,

I think Thursday at 3:00pm would be nice based on your schedule. Please let me know if you are ok with this.

Gregg

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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]

**Sent:** Tuesday, September 26, 2017 3:23 PM **To:** Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

I am here all week. I have very little going on Friday from lunch to 3:30 PM if that works in your time slot. I am very bust Wednesday so it will not work for me. Thursday could work but I have meetings 10-11 am and from 1-3 pm.

Mark

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]

**Sent:** Tuesday, September 26, 2017 2:02 PM **To:** Strynar, Mark < <a href="mailto:Strynar.Mark@epa.gov">Strynar.Mark@epa.gov</a>>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

Mark,

What is your arability this week? I have 3-4 of us that would like to visit and see this equipment in operation.

Thanks, Gregg

Thomas Gregg O'Neal, III, P.E.

Engineer

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From: Strynar, Mark [mailto:Strynar.Mark@epa.gov]

**Sent:** Tuesday, September 26, 2017 1:14 PM **To:** Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: RE: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

#### Gregg,

I have UPLC-MS/MS and HPLC-MS/MS as well as TOFMS, and QTOFMS apparatus we use regularly for PFAS measurements. I am glad to show it to you anytime we are around. I have been working closely with Chris Johnson and Linda Culpepper at NCDEQ since the GenX issue broke in June 2017 for water analysis.

Let me know what you availability is.

Mark

From: Merrill, Raymond

Sent: Tuesday, September 26, 2017 1:08 PM To: Strynar, Mark < Strynar, Mark@epa.gov>

Cc: Merrill, Raymond <Merrill.Raymond@epa.gov>; Oneal, Gregg <gregg.oneal@ncdenr.gov>

Subject: FW: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

# Mark

I'm forwarding an email from Gregg Oneal at NC DENR.

From our phone conversation, I know that you are in contact with folks at NC DENR related to PFOA and/or PFOS analysis by LC/MS/MS.

Greg is in the air program at DENR and as you can read from his email below, he has a general interest in gathering information and some familiarity with the equipment used for these analyses.

With this introduction, I'll leave it in your hands to make the connection with Gregg formally. Let me know if you need something from me.

Thanks

Ray

Raymond Merrill Ph.D. (Ray) | USEPA/OAQPS/AQAD/Measurement Technology Group

109 TW Alexander Drive (E143-02) | Research Triangle Park, NC 27711

email: merrill.raymond@epa.gov | Phone (919)541-5225 | Fax: (919) 541-0516

From: Oneal, Gregg [mailto:gregg.oneal@ncdenr.gov]

**Sent:** Tuesday, September 26, 2017 10:27 AM **To:** Merrill, Raymond < Merrill, Raymond@epa.gov >

Subject: Would like to see an operational i.e. EPA's (HPLC/MS/MS)

### Ray,

Does EPA-RTP have an operational (HPLC/MS/MS) that some of us from NCDEQ-DAQ Technical Services could see? This is the equipment listed in the EPA Drinking Water Method 537 and does the PFOA lab analysis. Do you know a contact? Some of us would like to get a better understanding if possible of this analysis and the equipment operation. Thanks,

Gregg

# Thomas Gregg O'Neal, III, P.E.

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